



First-A: Reproductive Physiology (3 Credits): Theory (2hour / week)

Topics		The Lecturer	Date
1-	Physiological anatomy of female reproductive system	Asst. Prof. Dr. Essraa M. Al-Essawe	3/9
2-	Normal and abnormal Puberty & menarche	Lec. Dr. Wasan Hamad	10/9
3	Monthly menstrual cycle: Follicular phase	Prof. Dr. Manal Taha	17/9
4-	Monthly menstrual cycle: Ovulation	Prof. Dr. Manal Taha	24/9
5-	Monthly menstrual cycle: Luteal phase	Prof. Dr. Manal Taha	1/10
6-	Effect of Endocrine Disorders on Female Reproduction	Asst. Prof. Dr. Lubna Amer	8/10
7-	Examination	Mid –term	15/10
8.	Monthly endometrial cycle & menstruation	Asst. Prof. Dr. Wasan Adnan	22/10
9.	Menopause and andropause	Asst. Prof. Dr. Wasan Adnan	29/10
10.	Physiological anatomy of male sexual organ & Accessory glands	Prof. Dr. Saad Aldujaily	5/11
11	Gender differentiation Abnormality	Asst. Prof. Dr. Essraa M. Al-Essawe	12/11
12-	Hypothalamic & pituitary hormonal control of male sexual functions	Asst. Prof. Dr. Hayder Ali Lafta	19/11
13-	Hormonal control of spermatogenesis	Asst. Prof. Dr. Hayder Ali Lafta	26/11
14-	Male sexual acts & psychological effect on sperm production	Prof. Dr. Ula M. Al-Kawaz	3/12
15-	Endocrine disruptors	Asst. Prof. Dr. Essraa M. Al-Essawe	10/12



First-B: Reproductive physiology: Practical (3 hours/ week)

Topics		The Lecturer	Date
1-	Female reproductive system histology	Asst. Prof. Dr. Essraa M. Al-Essawe	3/9
2-	Hormonal & non hormonal stages of oogenesis	Asst. Prof. Dr. Essraa M. Al-Essawe	10/9
3-	Abnormal hormonal profile affecting folliculogenesis	Asst. Prof. Dr. Wasan Hamad	17/9
4-	Follicular growth by ultrasound	Lec. Dr. Hayder Al-Jabery	24/9
5-	Histology of endometrium at different phases of cycle & ultrasound examination	Asst. Prof. Dr. Wasan Adnan	1/10
6-	Normal histology & ultrasound finding of menopause & oophorectomized female	Lec. Dr. Hayder Al-Jabery	8/10
7-	Examination	Mid –term	15/10
8-	Imaging in male infertility	Lec. Dr. Hayder Al-Jabery	22/10
9-	Histology of male reproductive organs & gland	Asst. Prof. Dr. Essraa M. Al-Essawe	29/10
10-	Practical study of abnormal puberty (semen exam, phenotypic, karyotypic&histology)	Asst. Prof. Dr. Hayder Ali Lafta	5/11
11-	Examination of sperm at different stages of development	Asst. Prof. Dr. Hayder Ali Lafta	12/11
12-	SFA	Asst. Prof. Dr. Hayder Ali Lafta	19/11
13-	Phenotypic, SFA, hormonal study of azoospermic (obstructive&dysrhythmic)	Prof. Dr. Saad Aldujaily	26/11
14-	Capacitation & acrosomal reaction	Prof. Dr. Saad Aldujaily	3/12
15-	Hormonal assessment of infertile male	Asst. Prof. Dr. Hayder Ali Lafta	10/12

م.م. غادة باسم
م.م. زهراء علي

م.م. خليل ابراهيم
م.م. منار الهدى زياد

التدريسيين المشاركين
م.م. شمس انمار



Second-A: Reproductive Embryology (3 Credits): Theory (2 hours \ Week):

Topics		The Lecturer	Date
1-	Development of male and female reproductive system	Asst. Prof. Nisreen khazaal	2/9
2-	Gametogenesis, spermatogenesis & oogenesis	Asst. Prof. Dr. Essraa M. Al-Essawe	9/9
3-	Ovulation	Asst. Prof. Dr. Essraa M. Al-Essawe	16/9
4-	Fertilization (PN stage) Pre-implantation (blastocyst stage embryo)	Prof. Dr. Saad Aldujaily	23/9
5-	Implantation	Prof. Dr. Saad Aldujaily	30/9
6-	Normal and abnormal development of cleavage stage embryo	Asst. Prof. Nisreen khazaal	7/10
7-	Examination	Mid-Term	14/10
8-	Formation of bilaminar germ disc	Prof. Dr. Saad Aldujaily	21/10
9-	The trilaminar germ disc Embryonic development & fetal period	Prof. Dr. Saad Aldujaily	28/10
10-	The placenta & fetal membranes (abnormalities of amnion, placenta and umbilical cord)	Asst. Prof. Dr. Wasan Adnan	4/11
11-	Development & derivative of ectoderm	Asst. Prof. Nisreen khazaal	11/11
12-	Development & derivative of mesoderm Teratology & teratogens	Asst. Prof. Nisreen khazaal	18/11
13-	Development & derivative of endoderm	Asst. Prof. Dr. Hayder Ali Lafta	25/11
14-	Embryonic development and fetal period	Asst. Prof. Dr. Wasan Adnan	2/12
15-	Teratology & Birth defects	Asst. Prof. Dr. Lubna Amer	9/12



Second-B: Reproductive Embryology: Practical (3hours \ Week)

Topics		The Lecturer	Date
1-	Histological aspects of male Reproductive system	Prof. Dr. Saad Aldujaily	2/9
2-	Gametogenesis: spermatogenesis	Asst. Prof. Dr. Essraa M. Al-Essawe	9/9
3-	Gametogenesis: Oogenesis	Asst. Prof. Dr. Essraa M. Al-Essawe	16/9
4-	Examination of mature & immature / morphologically normal & abnormal sperms in human	Asst. Prof. Dr. Hayder Ali Lafta	23/9
5-	Examination of mature & immature / morphologically normal & abnormal oocyte in human	Asst. Prof. Dr. Hayder Ali Lafta	30/9
6-	Examination of fertilized oocytes with slides (<i>PN stage embryo</i>)	Prof. Dr. Saad Aldujaily	7/10
7-	Examination	Mid-Term	14/10
8-	Normal and abnormal embryonic development (cleavage stage)	Asst. Prof. Nisreen khazaal	21/10
9-	Examination of early cleavage embryos with the effect of pH & temperature on them with slides	Asst. Prof. Dr. Hayder Ali Lafta	28/10
10-	Examination & determination of <i>normal</i> blastocyst with slides	Prof. Dr. Saad Aldujaily	4/11
11-	Examination & determination of <i>Abnormal</i> blastocyst with slides	Prof. Dr. Saad Aldujaily	11/11
12-	Examination & determination the effect of some poisons on the embryonic development	Asst. Prof. Dr. Hayder Ali Lafta	18/11
13-	Examination & determination of the effect of some materials on embryonic development	Asst. Prof. Dr. Hayder Ali Lafta	25/11
14-	Examination & determination of the effect of herbal plants on embryonic development	Asst. Prof. Dr. Hayder Ali Lafta	2/12

التدريسيين المشاركين م.م. غادة باسم م.م. شمس انمار
م.م. منار الهدى زياد م.م. زهراء علي



Third-A: Clinical Biochemistry (3 Credits): Theory (2 hours \ Week):

Topics		The Lecturer	Date
1-	The metabolism, integration pathway	Prof. Dr. Estabraq Al-Wassiti	7/9
2-	Inborn error of metabolism	Prof. Dr. Estabraq Al-Wassiti	14/9
3-	Mechanism of hormone action	Asst. Prof. Dr. Muayad Srebit	21/9
4-	Biochemistry of steroidal hormones Biochemistry of non steroidal hormones	Prof. Dr. Estabraq Al-Wassiti	28/9
5-	The importance of trace minerals	Asst. Prof. Dr. Muayad Srebit	5/10
6-	Effect of ROS on Fertility	Asst. Prof. Dr. Muayad Srebit	12/10
7-	Examination	Mid –term	19/10
8-	Nucleic acids structure	Prof. Dr. Estabraq Al-Wassiti	26/10
9-	Nucleic acid replication, transcription and protein synthesis	Prof. Dr. Estabraq Al-Wassiti	2/11
10-	DNA & RNA polymerase and basis of polymerase chain reaction(PCR)	Prof. Dr. Estabraq Al-Wassiti	9/11
11-	Estrogen and progesterone synthesis and effects	Asst. Prof. Dr. Muayad Srebit	16/11
12-	Pharmaceutical and pharmacodynamic action of fertility drugs (bioavailability,excretion)	Asst. Prof. Dr. Muayad Srebit	23/11
13-	Pharmaceutical and pharmacodynamic action of fertility drugs (factors modifying drug action)	Asst. Prof. Dr. Muayad Srebit	30/11
14-	Hormonal Drugs used in male infertility	Asst. Prof. Dr. Muayad Srebit	7/12
15-	Hormonal Drugs used in female infertility	Asst. Prof. Dr. Muayad Srebit	14/12



Third-B: Clinical Biochemistry: Practical (3 hours \ Week):

Topics		The Lecturer	Date
1-	Spectrophotometer system	Prof. Dr. Estabraq Al-Wassiti	7/9
2-	Principles and application of Chromatography	Prof. Dr. Estabraq Al-Wassiti	14/9
3-	Principles and application of ELISA	Prof. Dr. Estabraq Al-Wassiti	21/9
4-	Principles and application of RIA	Prof. Dr. Estabraq Al-Wassiti	28/9
5-	Principles and application of Autoanalyzer	Asst. Prof. Dr. Muayad Srebit	5/10
6-	ROS Estimation	Prof. Dr. Estabraq Al-Wassiti	12/10
7-	Examination	Mid –term	19/10
8-	DNA Extraction I	Prof. Dr. Estabraq Al-Wassiti	26/10
9-	DNA Extraction II	Prof. Dr. Estabraq Al-Wassiti	2/11
10-	PCR	Prof. Dr. Estabraq Al-Wassiti	9/11
11-	Hormonal assay I	Asst. Prof. Dr. Muayad Srebit	16/11
12-	Hormonal assay II	Asst. Prof. Dr. Muayad Srebit	23/11
13-	Case report I	Asst. Prof. Dr. Muayad Srebit	30/11
14-	Case report II	Asst. Prof. Dr. Muayad Srebit	7/12
15-	Vitamins measurement by electrophoresis	Prof. Dr. Estabraq Al-Wassiti	14/12

التدريسيين المشاركين: م.د. زهراء احمد -م.م. خليل ابراهيم -م.م. منى علاوي- م.م. زينب حارث



Fourth: Infertility (1 Credit): Theory (1 hour \ Week)

Topics		The Lecturer	Date
1-	Investigations of infertile couple	Asst. Prof. Dr. Lubna Amer	7/9
2-	Higher center cause of infertility: Primary hypogonadotropic hypogonadism	Lec. Dr. Wasan Hamad	14/9
3-	Higher center cause of infertility: secondary hypogonadotropic hypogonadism	Lec. Dr. Wasan Hamad	21/9
4-	Ovulatory cause of infertility:PCOS	Prof. Dr. Manal Taha	28/9
5-	Ovulatory cause of infertility: Poor responders	Prof. Dr. Manal Taha	5/10
6-	Mechanical cause of infertility (cervical, uterine, tubal)	Asst. Prof. Dr. Lubna Amer	12/10
7-	Examination	Mid-Term	19/10
8-	Infectious cause of female infertility	Asst. Prof. Dr. Wasan Adnan	26/10
9-	Immunological disorders of pregnancy	Lec. Dr. Wasan Hamad	2/11
10-	Higher center cause of male infertility (hypogonadotropic hypogonadism, hyperprolactinemia)	Prof. Dr. Ula M. Al-Kawaz	9/11
11-	Testicular cause of infertility: Distractive (causes, diagnoses, treatment)	Prof. Dr. Ula M. Al-Kawaz	16/11
12-	Testicular cause of infertility: Obstructive (causes, diagnoses, treatment)	Prof. Dr. Ula M. Al-Kawaz	23/11
13-	Ejaculatory cause of infertility	Prof. Dr. Ula M. Al-Kawaz	30/11
14-	Abnormal spermatogenesis	Prof. Dr. Ula M. Al-Kawaz	7/12
15-	Unexplained couple infertility	Asst. Prof. Dr. Wasan Adnan	14/12



Fifth: Medical Statistics (1 Credit): Theory (1 hour \ Week)

Topics		The Lecturer	Date
1-	Collection of data & sampling	Asst. Prof. Dr. Waleed Arif Al-Ani	8/9
2-	Population & normal distribution of curve	Asst. Prof. Dr. Waleed Arif Al-Ani	15/9
3-	Presentation of statistics, graphs, tables & others	Asst. Prof. Dr. Waleed Arif Al-Ani	22/9
4-	Measures of central tendency, mean, mode, median	Asst. Prof. Dr. Waleed Arif Al-Ani	29/9
5-	Measures of dispersion, standard deviation & standard error of the mean	Asst. Prof. Dr. Waleed Arif Al-Ani	6/10
6-	Tests of significance, t-test, F-test & Chi-square I	Asst. Prof. Dr. Waleed Arif Al-Ani	13/10
7-	Mid Exam	Mid Exam	20/10
8-	Tests of significance, t-test, F-test & Chi-square II	Asst. Prof. Dr. Waleed Arif Al-Ani	27/10
9-	Correlation	Asst. Prof. Dr. Waleed Arif Al-Ani	3/11
10-	Regression	Asst. Prof. Dr. Waleed Arif Al-Ani	10/11
11-	Experimental designs	Asst. Prof. Dr. Waleed Arif Al-Ani	17/11
12-	Clinical trials, single blind, double & multi-center studies	Asst. Prof. Dr. Waleed Arif Al-Ani	24/11
13-	Computer packages for statistical evaluation	Asst. Prof. Dr. Waleed Arif Al-Ani	1/12
14-	Applications of statistical methods in research	Asst. Prof. Dr. Waleed Arif Al-Ani	8/12
15-	Overview		15/12

التدريسيين المشاركين: م.م. مصطفى محمد- م.م. منى علاوي



Sixth: English (1 Credit):Theory (1 hour \ Week):

Topics		The Lecturer	Date
1-	Introduction	Lec. Dr. Sahar Sabhan	2/9
2-	Unit One: International Student (part 1)	Lec. Dr. Sahar Sabhan	9/9
3-	Unit One: International Student (part 2)	Lec. Dr. Sahar Sabhan	16/9
4-	Unit Two: Where in the word? (part 1)	Lec. Dr. Sahar Sabhan	23/9
5-	Unit Two: Where in the word? (part 2)	Lec. Dr. Sahar Sabhan	30/9
6-	Articles in English	Lec. Dr. Sahar Sabhan	7/10
7-	Examination	Mid-Term	14/10
8-	Unit Three: Modern Technology (part 1)	Lec. Dr. Sahar Sabhan	21/10
9-	Unit Three: Modern Technology (part 2)	Lec. Dr. Sahar Sabhan	28/10
10-	The Passive voice in English	Lec. Dr. Sahar Sabhan	4/11
11-	Unit Four: Conferences and Visits (part 1)	Lec. Dr. Sahar Sabhan	11/11
12-	Unit Four: Conferences and Visits (part 1)	Lec. Dr. Sahar Sabhan	18/11
13-	Unit Five: Newspaper Articles (part 1)	Lec. Dr. Sahar Sabhan	25/11
14-	Unit Five: Newspaper Articles (part 2)	Lec. Dr. Sahar Sabhan	2/12
15-	Overview	Lec. Dr. Sahar Sabhan	9/12



بسم الله الرحمن الرحيم

University of Al-Nahrain
High Institute for Infertility Diagnosis and ART
Department of Physiology

High Diploma in clinical infertility and Assisted Reproductive Technologies

First semester

2025-2026

Planned Curriculum

Courses:

- 1- Reproductive Physiology (3 Credits)
- 2- Reproductive Embryology (3 Credits)
- 3- Clinical Biochemistry (3 Credits)
- 4- Infertility (1 Credit)
- 5- Medical Statistics (1 Credit)
- 6- English (1 Credit)



First-a: ART (3 Credits): Theory (2hours / week)

Topics		The Lecturer	Date
1-	Principles of IUI	Assist. prof. Dr. Lubna Amer	9/2
2-	Drugs used for ovulation induction	Assist. prof. Dr. Muayad Sraibet	16/2
3-	Ovulation Induction in low high responders	Prof. Dr. Manal Taha	23/2
4-	Ovulation Induction in low responders	Prof. Dr. Manal Taha	2/3
5-	Pathophysiology and management of OHSS	Assist. prof. Dr. Lubna Amer	9/3
6-	Medical and anatomical problems in ART (endometriosis, hydrosalpings, uterine anomalies)	Assist. prof. Dr. Wasan Adnan	16/3
7-	Examination	Mid –term	23/3
8-	Oocytes retrieval and embryo transfer	Prof. Dr. Manal Taha	30/3
9-	Complications of ICSI procedure	Assist. Prof. Dr. Wasan Adnan	6/4
10-	Frozen Cycle	Prof. Dr. Manal Taha	13/4
11-	Significance of single embryo transfer and medical problems of multiple pregnancy	Assist. Prof. Dr. Wasan Adnan	20/4
12-	Luteal support of fresh and frozen cycles	Prof. Dr. Manal Taha	27/4
13-	Repeated Implantation failure	Assist. prof. Dr. Wasan Adnan	4/5
14-	Anesthesia in IVF	Assist. Prof. Dr. Raad Reshan	11/5
15-	Relation between stress and IVF outcome	Assist. Prof. Dr. Wasan Adnan	18/5

* Assisted Reproductive Technologies



First-b: ART Practical: (3hours \ Week)

Topics		The Lecturer	Date
1-	Principles of IUI	Assist. prof. Dr. Lubna Amer	9/2
2-	Drugs used for ovulation induction	Assist. prof. Dr. Muayad Sraibet	16/2
3-	Ovulation Induction in low high responders	Prof. Dr. Manal Taha	23/2
4-	Ovulation Induction in low responders	Prof. Dr. Manal Taha	2/3
5-	Pathophysiology and management of OHSS	Assist. prof. Dr. Lubna Amer	9/3
6-	Medical and anatomical problems in ART (endometriosis, hydrosalpings, uterine anomalies)	Assist. prof. Dr. Wasan Adnan	16/3
7-	Examination	Mid –term	23/3
8-	Oocytes retrieval and embryo transfer	Prof. Dr. Manal Taha	30/3
9-	Complications of ICSI procedure	Assist. Prof. Dr. Wasan Adnan	6/4
10-	Frozen Cycle	Prof. Dr. Manal Taha	13/4
11-	Significance of single embryo transfer and medical problems of multiple pregnancy	Prof. Dr. Wasan Adnan	20/4
12-	Luteal support of fresh and frozen cycles	Prof. Dr. Manal Taha	27/4
13-	Repeated Implantation failure	Assist. prof. Dr. Wasan Adnan	4/5
14-	Anesthesia in IVF	Assist. Prof. Dr. Raad Reshan	11/5
15-	Relation between stress and IVF outcome	Assist. Prof. Dr. Wasan Adnan	18/5

التدريسين المشاركين:

Assist. Lec. Zahraa Ahmed

Assist. Lec. Manaralhuda Ziad

Assist. Lec. Gahda Basim

Lec.Dr. Wasan Hamed



Second-a: Andrology (3 Credits): Theory (2hours / week)

Topics		The Lecturer	Date
1-	Physiology of testicular function	Assist. Prof. Dr. Essraa M. Al-Essawe	12/2
2-	Physiology of sperms maturation and fertilization	Assist. Prof. Dr. Hayder Ali Lafta	19/2
3-	Classification of Andrology disease	Prof. Dr. Ula M. Al-Kawaz	26/2
4-	Physical examination, diagnostic imaging, and laboratory tests	Prof. Dr. Ula M. Al-Kawaz	5/3
5-	Semen analysis	Assist. Prof. Dr. Essraa M. Al-Essawe	12/3
6-	Sperms quality and function tests	Asstist. Prof. Dr. Hayder Ali Lafta	19/3
7-	Examination	Mid-Term	26/3
8-	Testicular biopsy and histology	Assist. Prof. Dr. Essraa M. Al-Essawe	2/4
9-	Disease of hypothalamus and pituitary (Aging male and late onset hypogonadism)	Prof. Dr. Ula M. Al-Kawaz	9/4
10-	Disease of testicular level, and testicular dysfunction in systemic disease	Prof. Dr. Ula M. Al-Kawaz	16/4
11-	Environmental influence on male reproductive health	Prof. Dr. Saad Al-Dujaily	23/4
12-	Testosterone therapy	Prof. Dr. Ula M. Al-Kawaz	30/4
13-	Empirical treatment for Idiopathic male infertility	Prof. Dr. Ula M. Al-Kawaz	7/5
14-	Psychology of fertility disease	Assist. Prof. Dr. Muayad Sraibet	14/5
15-	Effect of oxidative stress on male infertility	Assist. Prof. Dr. Muayad Sraibet	21/5



Second-b: Andrology: Practical (3hours \ Week)

Topics		The Lecturer	Date
1-	Histology- Physiology of Male Reproductive System	Assist. Prof. Dr. Essraa M. Al-Essawe	12/2
2-	Seminal Fluid Analysis I	Assist. Prof. Dr. Essraa M. Al-Essawe	19/2
3-	Seminal Fluid Analysis II	Assist. Prof. Dr. Essraa M. Al-Essawe	26/2
4-	Seminal Fluid Analysis III	Assist. Prof. Dr. Essraa M. Al-Essawe	5/3
5-	Seminal Fluid Analysis With Kruger Strict Criteria	Prof. Dr. Saad Al-Dujaily	12/3
6-	Testicular Biopsy	Prof. Dr. Ula M. Al-Kawaz	19/3
7-	Mid-Term	Examination	26/3
8-	Sperm Penetration Assay	Assist. Prof. Dr. Hayder Ali Lafta	2/4
9-	HOS Test	Assist. Prof. Dr. Essraa M. Al-Essawe	9/4
10-	PCT	Prof. Dr. Saad Al-Dujaily	16/4
11-	Detection of Oxidative Stress	Assistant Prof. Dr. Muayad Sraibet	23/4
12-	Effect of electro-magnetic waves on spermatogenesis	Assist. Prof. Dr. Essraa M. Al-Essawe	30/4
13-	Anti sperm Antibody and Semen Microbiology	Prof. Dr. Saad Al-Dujaily	7/5
14-	Detection of Leukocytes in Semen	Prof. Dr. Saad Al-Dujaily	14/5
15-	Prediction of varicocele through semen analysis	Prof. Dr. Saad Al-Dujaily	21/5

التدريسيين المشاركين:

Assist. Prof. Nisreen khazaal
 Assist. Lec. Zahraa Ahmed

Assist. Lec. Khalil Ibrahim
 Assist. Lec. Shams Anmar



Third-a: Reproductive Micromanipulation techniques (3 Credits): Theory (2hours / week)

Topics		The Lecturer	Date
1-	Quality Control maintaining stability of ICSI lab	Assist. Prof. Dr. Hayder Ali Lafta	10/2
2-	Oocytes preparation, assessment, and selection for ICSI	Prof. Dr. Saad Aldujaily	17/2
3-	Oocytes IVM	Prof. Dr. Saad Aldujaily	24/2
4-	Evaluation, and preparation of sperms for ICSI (Direct sample, and biopsy sample)	Assist. Prof. Dr. Hayder Ali Lafta	3/3
5-	ICSI (technical aspect)	Assist. Prof. Dr. Hayder Ali Lafta	10/3
6-	Analysis of fertilization and embryos assessment	Prof. Dr. Saad Aldujaily	17/3
7-	Examination	Mid –term	24/3
8-	Culture system of different stages	Assist. Prof. Dr. Hayder Ali Lafta	7/4
9-	Preimplantation Genetic Testing (PGT)	Assist. prof. Dr. Lubna Amer	14/4
10-	Assisted hatching	Assist. prof. Dr. Lubna Amer	21/4
11-	Human embryo blastomere biopsy and polar body biopsy	Assist. Prof. Dr. Hayder Ali Lafta	28/4
12-	Cryopreservation of gametes	Assist. Prof. Dr. Essraa M. Al-Essawe	5/5
13-	Human embryos vitrification	Assist. Prof. Dr. Essraa M. Al-Essawe	12/5
14-	Sperms preparation for gender selection	Assist. Prof. Dr. Hayder Ali Lafta	19/5
15-	Human Embryonic Stem Cells	Prof. Dr. Saad Aldujaily	26/5



Third-b: Reproductive Micromanipulation techniques: Practical (3hours \ Week)

Topics		The Lecturer	Date
1-	Parts of Micromanipulators: handling micromanipulator	Prof. Dr. Saad Aldujaily	10/2
2-	ICSI Technique (immobilization, aspiration and sperm injection) I	Prof. Dr. Saad Aldujaily	17/2
3-	Techniques of sperm isolation from testicular and epididymal biopsies	Assist. Prof. Dr. Hayder Ali Lafta	24/2
4-	Oocytes preparation, assessment, and selection for ICSI	Assist. Prof. Dr. Hayder Ali Lafta	3/3
5-	ICSI Technique (Oocyte holding and position for sperm injection) II	Assist. Prof. Dr. Hayder Ali Lafta	10/3
6-	Analysis of fertilization and embryos assessment	Prof. Dr. Saad Aldujaily	17/3
7-	Mid-Term	Examination	24/3
8-	Techniques of polar body and blastomere biopsies	Assist. Prof. Dr. Hayder Ali Lafta	7/4
9-	Preimplantation Genetic Testing (PGT)	Assist. Prof. Dr. Lubna Amer	14/4
10-	Assisted hatching	Assist. Prof. Dr. Lubna Amer	21/4
11-	Embryo Transfer (technical aspect)	Assist. Prof. Dr. Hayder Ali Lafta	28/4
12-	Cryopreservation of gametes	Assist. Prof. Dr. Essraa M. Al-Essawe	5/5
13-	Human embryos vitrification	Assist. Prof. Dr. Essraa M. Al-Essawe	12/5
14-	Sperms preparation for IUI	Prof. Dr. Saad Aldujaily	19/5
15-	Sperms preparation for gender selection	Prof. Dr. Saad Aldujaily	26/5

التدريسيين المشاركين:

Assist. Prof. Nisreen khazaal
 Assist. Lec. Shams Annmar

Lec.Dr. Wasan Hamed



Fourth-a: Cytogenetic and Molecular Biology: (3 Credits): Theory (2hours / week)

Topics		The Lecturer	Date
1-	The structure and function of the nucleus	Prof. Dr. Salwa Jaber Al-Awadi	11/2
2-	Molecular biology of nucleic acids	Prof. Dr. Salwa Jaber Al-Awadi	18/2
3-	Cell division and cell cycle	Prof. Dr. Salwa Jaber Al-Awadi	25/2
4-	Karyotyping and banding techniques	Prof. Dr. Salwa Jaber Al-Awadi	4/3
5-	Fluorescent in situ hybridization	Prof. Dr. Salwa Jaber Al-Awadi	11/3
6-	Chromosomal abnormalities	Prof. Dr. Salwa Jaber Al-Awadi	18/3
7-	Examination	Mid-Term	25/3
8-	Genes and mutations	Prof. Dr. Salwa Jaber Al-Awadi	1/4
9-	Human genetic disorders	Prof. Dr. Salwa Jaber Al-Awadi	8/4
10-	Cell and tissue culture	Prof. Dr. Salwa Jaber Al-Awadi	15/4
11-	Stem cells	Prof. Dr. Saad Aldujaily	22/4
12-	Genetic engineering	Prof. Dr. Salwa Jaber Al-Awadi	29/4
13-	Cloning	Prof. Dr. Saad Aldujaily	6/5
14-	Tunel assay	Prof. Dr. Salwa Jaber Al-Awadi	13/5



Fourth-b: Cytogenetic and Molecular Biology: Practical (3hours \ Week)

	Topics	The Lecturer	Date
1-	Chromosomal Karyotyping (I)	Prof. Dr. Salwa Jaber Al-Awadi	11/2
2-	Chromosomal Karyotyping (II)	Prof. Dr. Salwa Jaber Al-Awadi	18/2
3-	FISH (I)	Prof. Dr. Salwa Jaber Al-Awadi	25/2
4-	FISH (II)	Prof. Dr. Salwa Jaber Al-Awadi	4/3
5-	PCR (I)	Prof. Dr. Salwa Jaber Al-Awadi	11/3
6-	PCR (II)	Prof. Dr. Salwa Jaber Al-Awadi	18/3
7-	Examination	Mid-Term	25/3
8-	Sperm chromatin assay (I)	Prof. Dr. Saad Aldujaily	1/4
9-	Sperm chromatin assay (II)	Prof. Dr. Saad Aldujaily	8/4
10-	Oocyte chromatin staining	Prof. Dr. Salwa Jaber Al-Awadi	15/4
11-	Chromosomal staining for fertilized ova	Prof. Dr. Salwa Jaber Al-Awadi	22/4
12-	Comet essay in general(I)	Prof. Dr. Salwa Jaber Al-Awadi	29/4
13-	Comet essay in general (II)	Prof. Dr. Salwa Jaber Al-Awadi	6/5
14-	Tunel essay for male infertility	Prof. Dr. Salwa Jaber Al-Awadi	13/5

التدريسين المشاركين:

Assist. Lec. Khalil Ibrahim

Assist. Lec. Zahraa Ahmed

Assist. Lec. Zainab Harith



Fifth: English (1 Credit): Theory (1hour / week)

Topics		The Lecturer	Date
1-	Science and our world (part I)	Lec. Dr. Sahar Naeem Sabhan	10/2
2-	Science and our world (part II)	Lec. Dr. Sahar Naeem Sabhan	17/2
3-	Travel and tourism (part I)	Lec. Dr. Sahar Naeem Sabhan	24/2
4-	Travel and tourism (part II)	Lec. Dr. Sahar Naeem Sabhan	3/3
5-	People: past and present (part I)	Lec. Dr. Sahar Naeem Sabhan	10/3
6	People: past and present (part II)	Lec. Dr. Sahar Naeem Sabhan	17/3
7-	Examination	Mid-Term	24/3
8-	Inventions, discoveries and processes (part I)	Lec. Dr. Sahar Naeem Sabhan	7/4
9-	Inventions, discoveries and processes (part II)	Lec. Dr. Sahar Naeem Sabhan	14/4
10-	Paraphrasing and Avoiding plagaisism (part I)	Lec. Dr. Sahar Naeem Sabhan	21/4
11-	Paraphrasing and Avoiding plagaisism (part II)	Lec. Dr. Sahar Naeem Sabhan	28/4
12-	Talking about cause and effect	Lec. Dr. Sahar Naeem Sabhan	5/5
13-	The world of IT (part I)	Lec. Dr. Sahar Naeem Sabhan	12/5
14-	The world of IT (part II)	Lec. Dr. Sahar Naeem Sabhan	19/5
15-	Overview	Lec. Dr. Sahar Naeem Sabhan	26/5

* Academic skills 2nd term



Sixth-: Research Methods and Seminars: (2 Credits): Theory (2hours / week)

	Topics	The Lecturer	Date
1-	Introduction to Research Methods, Thesis Process	Assist. Prof. Dr. Essraa M. Al-Essawe	9/2
2-	Literature Review and Problem Statement	Assist. Prof. Dr. Essraa M. Al-Essawe	16/2
3-	Research Design and Methodology	Assist. Prof. Dr. Essraa M. Al-Essawe	23/2
4-	Data Collection and Analysis Advanced Statistical Analysis	Assist. Prof. Dr. Essraa M. Al-Essawe	2/3
5-	Ethical Considerations in Research and Publication	Assist. Prof. Dr. Essraa M. Al-Essawe	9/3
6	Thesis Structure and Organization Writing the Introduction	Assist. Prof. Dr. Essraa M. Al-Essawe	16/3
7-	Examination	Mid-Term	23/3
8-	Writing the Methodology and Results Sections	Assist. Prof. Dr. Essraa M. Al-Essawe	30/3
9-	Writing the Discussion and Conclusion Sections	Assist. Prof. Dr. Essraa M. Al-Essawe	6/4
10-	Citation and Referencing Management	Assist. Prof. Dr. Essraa M. Al-Essawe	13/4
11-	Abstract Writing and Summarizing the Thesis	Assist. Prof. Dr. Essraa M. Al-Essawe	20/4
12-	Manuscript Preparation and Publication Process I	Assist. Prof. Dr. Essraa M. Al-Essawe	27/4
13-	Manuscript Preparation and Publication Process II	Assist. Prof. Dr. Essraa M. Al-Essawe	4/5
14-	Presenting Research Findings	Assist. Prof. Dr. Essraa M. Al-Essawe	11/5
15-	Final Presentations	Assist. Prof. Dr. Essraa M. Al-Essawe	18/5



University of Al-Nahrain
High Institute for Infertility Diagnosis and ART
Department of Physiology
High Diploma in Assisted Reproductive Technologies

Second Semester

2024-2025

Planned Curriculum

Courses

- 1- Assisted Reproductive Technologies (3 Credits)
- 2- Reproductive Micromanipulation Techniques (3 Credits)
- 3- Andrology (3 Credits)
- 4- Cytogenetic and Molecular Biology (3 Credits)
- 5- English (1 Credit)
- 6- Research Methods and Seminars (2 Credits)